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ABSTRACT

The Army has identified the need for early and robust screening of Soldiers for a variety of health risk behaviors. Behavioral health factors are a key component of this. This report presents mental health screening data for 2,882 Soldiers seeking services at a military facility outpatient behavioral health clinic and 3,451 Soldiers screened 90 days following return from OIF deployment. The screening was completed via scanning software and has more recently been updated to a completed automated kiosk system. PTSD and depression were the most commonly identified disorders, followed by alcohol abuse. Screening positive for multiple symptom domains was common, with over 60% of the clinical sample screening positive for more than one clinical symptom domain. Clinical implications include the development of treatment approaches that address multiple diagnoses. Future research efforts in outpatient screening will assist in the design of clinical interventions. Comprehensive screening that leverages technology in a military setting is useful in case identification and in guiding clinician assessment and treatment efforts. Such a standardized approach enhances efficiency and ensures that all critical domains are addressed. Technology could potentially be leveraged even further in the form of online screening, psychoeducational tools, CBT modules, and virtual reality tools for assessment and treatment of combat-related symptoms.

BODY

Active duty Soldiers, particularly those experiencing combat, are at increased risk of mental health difficulties, particularly PTSD, depression, and anxiety (Hoge et al., 2004; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Stimpson, Thomas, Weightman, Dunstan, & Lewis, 2003). Both the stress of deploying and experiences during deployment are associated with a variety of mental health difficulties, including mood and adjustment disorders, anxiety, and posttraumatic stress symptomatology (National Center for PTSD, 2004). Behavioral health (BH) problems represent a major factor in the overall health and utilization of healthcare services for active duty Soldiers. Additional or co-occurring behavioral health difficulties have been linked to increased utilization of health care (Spitzer, Kroenke, & Williams, 1999), an issue that could have further implications for soldier readiness and military primary care. Mental disorders have been shown to be a primary source of disability and separations from the military, with a reported 6-month attrition rate of 45% for those hospitalized for mental health diagnoses (Hoge et al., 2005). A recent analysis of VA patient records indicated that possible mental disorders were reported for 26% of veterans who experienced combat in Iraq and Afghanistan (Kang & Hyams, 2005).

Identification of Soldiers who could benefit from early intervention is a significant challenge for the military. Soldiers are typically screened for health complaints immediately prior to and following deployment. Results from a ground breaking study published in the New England Journal of Medicine (Hoge et al., 2004) led the Assistant Secretary of Defense for Health Affairs to add a requirement for all Soldiers to receive an additional health screen three to six months post-deployment. Screening has also been identified as an effective first approach to prevention intervention for the detection of specific mental health difficulties such as alcoholism and depression (Greenfield et al., 2000; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). Screening has also been successfully used to identify mental health concerns in the wake of mass disaster (Jordan et al., 2004 ; Smith et al., 2004).

In an effort to identify Soldiers needing care, the Army has initiated several mental health screening efforts (Wright, Huffman, Adler, & Castro, 2002). The use of standardized tools for mental health screening can impact the accuracy of identification. For example, one study assessed the ability of primary care providers to identify service members with potential depressive symptoms (Hunter, Hunter, West, Kinder, & Carroll, 2002). Air Force physicians were able to correctly identify only 21% of those flagged for major depression by the PHQ depression module. Consistent and standardized screening procedures are therefore warranted to properly identify and treat this population. The leveraging of technology further enhances the effectiveness and efficiency of such a process.

KEY RESEARCH ACCOMPLISHMENTS

METHOD

To address the current needs of Soldiers, an automated screening tool was developed for use with active duty Soldiers presenting to an outpatient BH clinic. A first iteration of this tool was a scannable form created with Teleforms software, with data exportability to Microsoft Access. The updated version (as of August 2006) is completely automated, in which Soldiers enter screening responses directly at a computer kiosk. The updated version also features interactive reporting features for providers. A similar scannable tool was utilized in an effort to screen Soldiers returning from OIF deployments to the same geographic location. This study reviews existing data from both of these efforts in an attempt to describe the screened mental health characteristics of Soldiers during time of war.

Participants

Data for this study were from clinical records of 5533 active duty Army Soldiers, comprised of 2,882 entering an outpatient behavioral health clinic located in an Army Medical Treatment Facility (MTF), and 2651 who were screened as part of a post-deployment pilot health screening effort. The research protocol for this project was approved by the MAMC Department of Clinical Investigation (DCI). Soldier flow for the screening programs is illustrated in Figures 1 and 2 (appended).

Behavioral Health Clinic. The Behavioral Health Screening Instrument (BHSI) is administered in the Madigan Army Medical Center (MAMC) behavioral health clinic as part of standard clinic business practice. This screen consists of standardized measures covering multiple domains, including demographics and military information, psychosocial history, current symptoms and behavior, and prior stressors (e.g. child abuse). All active duty personnel presenting for intakes are asked to complete the BHSI paper form in the waiting room. Clinic staff members collect completed forms and scan them via Teleforms software, checking for accuracy and correcting duplicate responses when prompted. This process serves to populate a database, which is programmed to generate reports based on scale scores and critical item responses. Reports are then included in patient files for clinician review. All new cases seen in a military outpatient mental health clinic between June 2003 and July 2005 were considered for analysis. Data were available for 2,882 patients.

Clinic participants were patients who presented to the clinic via a number of referral sources. Clinic management statistics suggested the following breakdown of referral sources: self-referral (64%); pre- or post-deployment referral (22%); discharge from inpatient psychiatry (3%); command directed evaluations (e.g. fitness for duty, 5%); emergency room (3%); Reserve Officer Training Course (ROTC; 2%); and medical evacuation (1%). Completion of the instrument is routinely followed by a thorough assessment by a behavioral health provider.

Demographics for both of these samples, were comparable to that of the overall Army. Branch of service for the clinical group was primarily Army (97.8%) . Military status was categorized as Active (67.9%), Active Guard (11.6%), Guard (8.0%), Active Reserve (6.8%), and Reserve (5.7%).

Post-Deployment. Soldiers in the post-deployment screening group took part in a pilot mental health screening effort following redeployment to Ft. Lewis. The Health Risk Assessment – II (HRA-II) was administered in group format to Soldiers at approximately 90 days following return from deployment. The mental health items were part of an overall post-deployment wellness screening and made up approximately 70% of the screening items.

The HRA-II combines scales of the BHSI with more traditional Health Risk Assessment items. This screening tool was administered in a post-deployment screening setting, with large groups of Soldiers at a time completing the questionnaire on a scan form. Forms were then scanned on site to produce reports and transferred in batch form to a database. Soldiers meeting defined "urgent" criteria for depression or expressing suicidal ideation were seen on site by a psychologist. Those screening positive but not in the "urgent" range received information on making appointment so see BH or other appropriate referrals.

[INSERT FIGURE 2 ABOUT HERE]

Measures

The BHSI and HRA-II screens have overlapping clinical scales covering similar clinical domains, including depression, PTSD, relationship problems, anger, and alcohol misuse. Several scales of the BHSI and HRA-II, such as the BSI Hostility scale and the Quality of Marriage Index, overlap with those of the USAMRU-E tool (Wright, Huffman, Adler, & Castro, 2002). Select critical items and/or scales are drawn from the following measures.

Alcohol Use Disorder Detection Test. The Alcohol Use Disorder Detection Test (AUDIT) is a self-report measure of alcohol use intended for screening of alcohol use disorders (Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). Soldiers were reporting that they do not drink were instructed to skip the remaining AUDIT items.

PC-PTSD. The Primary Care PTSD screen (PC-PTSD) (Prins et al., 2003) is a brief, four-item self-report screening instrument for PTSD. The four items are the same PTSD items found on DOD Post-Deployment Health Screening Form (DD 2796), routinely administered to Soldiers following deployment.

Patient Health Questionnaire. Several scales of the BHSI are based upon the PRIME-MD Patient Health Questionnaire (PHQ; Spitzer et al., 1999). The PRIME-MD was developed by authors of the Structured Interview for DSM-IV (SCID; First et al., 1997), together with primary care physicians, and was based upon existing epidemiological research and psychiatric nosology (Hahn, Kroenke, Williams, & Spitzer, 2000). In a validation study, the PRIME-MD was administered to 1,000 patients from four primary care locations, including 303 from Walter Reed Army Medical Center. A primary care study of 3000 patients, including 431 who had mental

health diagnostic interviews, revealed sensitivity and specificity similar to that of the original, physician administered instrument. The advantage of using the PHQ is that it takes much less physician time to review (less than 3 minutes). When assessing it's perceived value to physicians, 87% found the diagnostic information "somewhat" or "very" useful and 88% found it "somewhat" or "very" comfortable for patients (Spitzer et al., 1999). Agreement between PRIME-MD based diagnoses and mental health practitioners for modules used in the BHSI was generally good (see Table 1).

PHQ-9. The PHQ-9, a self-report version of the PRIME-MD depression module, is a short, self-administered scale used to assess depression (Spitzer, Kroenke, & Williams, 1999). There are nine items based on DSM-IV (1994) diagnostic criteria. For major depressive disorder, the measure has 73% sensitivity, 98% specificity, and 93% overall accuracy (Spitzer, Kroenke, & Williams, 1999). Responses are scored as follows for the past two weeks time period: not at all = 0; several days = 1; more than half the days = 2; and nearly every day = 3.

PHQ Anxiety and Panic. The PHQ anxiety module is similar to the depression module with response ranging from 0 for not at all to 2 for more than half the days. Anxiety syndrome is suggested if anxiety or worry is endorsed for several or more days over the past four weeks and three or more of the remaining six anxiety questions are endorsed as "more than half the days." In order to suggest the presence of panic disorder, all of the five panic symptom questions must be endorsed. One study of 499 outpatients found the PHQ sufficiently sensitive (75%) in detecting the presence of panic disorder, with increased sensitivity when the algorithm was modified to require endorsement of only three (86%) or two (91%) panic items (Lowe et al., 2003).

Brief Symptom Inventory. The Brief Symptom Inventory (BSI) (L. R. Derogatis, 1993; L. R. Derogatis & Cleary, 1977; L. R. Derogatis & Savitz, 2000) is a shorter version of the widely accepted Symptom Checklist-90 Revised (SCL-90-R) (L. R. Derogatis & Cleary, 1977). This scale is comprised of five items that are rated from not at all = 0 to very often = 4. Scores are generated by totaling the number of items marked "often" or "very often." A score of 2 or more or an endorsement of the item referring to "urges to beat, injure, or harm someone" would be flagged for clinical purposes.

Quality of Marriage Index. The Quality of Marriage Index (QMI) is an empirically derived, six item scale designed to be brief and focused on a single construct. The QMI has good established concurrent validity with the Kansas Marital Satisfaction Scale (Calahan, 1996). The six items are based on a factor analysis of 430 responses to the Partner Communication Scale (PCS), which is a longer (261) item measure. Originally, eight items loaded on Factor One and two of these were removed because they did not meet the semantic or correlated criteria for the study. The six suggested QMI items with the highest factor loadings and correlations that met semantic criteria (Norton, 1983) are included in the BHSI.

In addition to the clinical scales, the BHSI and HRA-II include sections based on the following domains: demographics and military information, (e.g. date of birth, current rank, years in military, months deployed), and psychosocial history (e.g. relationships, mental health treatment, physical health). The BHSI also contains sections on prior stressors (e.g. child abuse) and

resilience factors (e.g. family and social support, including current unit support). Additionally, there were items pertaining to adverse experiences (e.g. childhood abuse, combat experiences) and other psychosocial history that were on the BHSI but not the HRA-II, thus data are only available for the clinical sample for these domains and analyses for these have been previously reported (Gahm, Lucenko, Retzlaff, & Fukuda, in press).

Unit Support. Additional experience questions were drawn from the Deployment Risk and Resilience Inventory (DRRI) (King, King, & Vogt, 2003), which was developed as a research measure to evaluate factors related to long-term health for veterans. The entire DRRI includes 14 scales that may be used together or individually, with three general categories: pre-deployment/prewar, deployment/war-zone, and post-deployment/postwar. Scales used include Deployment Social Support (a.k.a. Unit Support).

REPORTABLE OUTCOMES

Analyses

All statistics were generated using SPSS version 13 for Windows. Symptom scale cutoffs are typically different for clinical and nonclinical populations, as individuals seeking treatment are likely to present with more severe symptomatology. However, for comparison purposes we utilized the same cutoffs for both groups.

Additionally, mean symptom scale scores and internal consistency analyses for the clinical sample can be viewed in Table 2.

Table 1: Automated Screening Results for Clinical and Post-deployment Samples.

Screen Positive for:	MAMC BH CLINIC N = 1626	90 Days Post-Deployment N = 3451
Depression	59%	34% (2.2% Urgent)
Anxiety	33%	12%
PTSD*	44-58%	13-23%
Panic*	15%	2%
Suicidal Ideation	21%	2%
Alcohol*	23%	22%

Depression = score of ≥ 5 (mild thru severe)
Anxiety = ≥ 3 items more than half the days
PTSD = score of 2-3
Suicidal ideation (*any* in past 2 weeks OR current)
Panic – all items endorsed
Alcohol – score of 8 or more

*updated sample for this item (N=2882)

Table 2: Patient Clinical Scales Intercorrelations and Internal Consistency Coefficients

|	M	SD	Depression	Anxiety	PTSD	Panic	Alcohol	QMI	Host.lity	Support
Depression	11.89	6.95	89							
Anxiety	2.02	1.87	718**	80						
PTSD	2.04	1.60	392**	357**	82					
Panic	17.	2.06	347**	337**	363**	92				
Alcoho	6.76	6.94	201**	134**	135**	12.**	87			
QMI	21.72	7.64	191**	081**	029	-.008	121**	97		
Host.lity	1.26	1.49	492**	503**	266**	198**	182**	092**	87	
Support	34.86	12.02	-.344**	-.271**	-13.**	118**	-.097**	.059*	-.298**	93

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
Coefficient alpha reliability estimates for each scale are underlined

In this exploratory investigation of existing screening data for the general population of Soldiers and those seeking mental health services, we were able to describe findings on clinical scales and demographic and psychosocial domains. Given the nature of the clinical sample, it was expected that most would screen positive for some mental health symptoms. In fact 89.4% screened positive for at least one symptom domain with multiple domains being the norm. Soldiers entering treatment for behavioral health difficulties reported symptoms for multiple domains as opposed to simply depression or PTSD; 62.6% screened positive for two or more clinical domains. This finding is consistent with findings for Vietnam veterans (Green, Lindy, Grace, & Gleser, 1989), suggesting that active duty Soldiers' clinical needs are indeed multifaceted and complex. The presence of co-morbid symptoms among this population has implications for future clinic developments and additional research. Much of the existing PTSD treatment outcomes research has failed to sufficiently take into account the common co-occurrence of additional symptoms and disorders (Spinazzola, Blaustein, & van der Kolk, 2005). This suggests a need to further explore this phenomenon in developing treatment approaches that address overlapping symptoms (e.g., anger, PTSD, and depression), as opposed to the traditional model of single diagnosis focused specialty groups. Additional or co-occurring behavioral health difficulties have been linked to increased utilization of health care (Spitzer, Kroenke, & Williams, 1999), an issue that could have further implications for soldier readiness and military primary care.

Figure 3. Percentage of Patients Screening Positive for 0, 1, and Multiple Clinical Symptom Domains (N = 2,882)

Number of Positive Screens
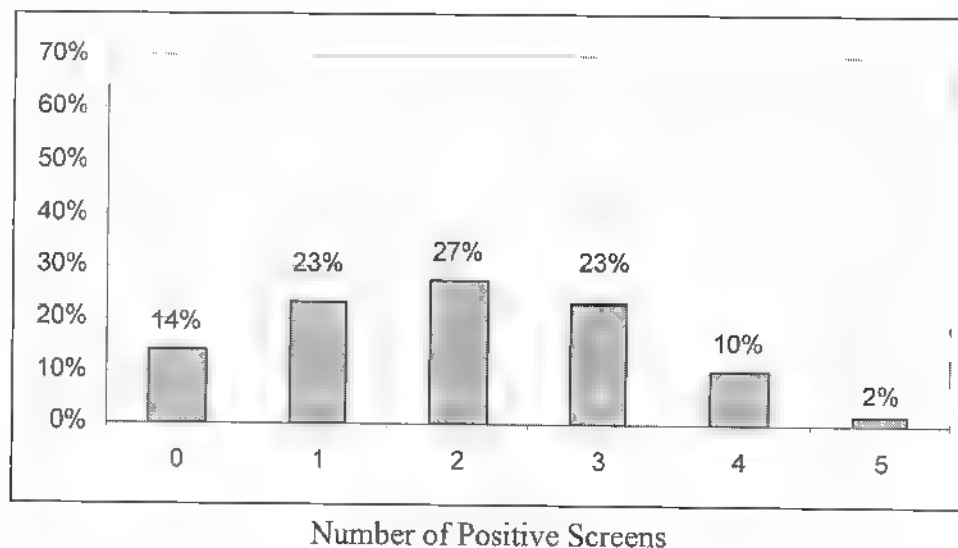
The clinical sample was relatively representative of the overall Army in terms of demographics, with women, younger, and lower ranking Service Members somewhat overrepresented. Many Soldiers seeking services in the outpatient clinic (62.4%) have also been deployed. It is possible that deployment experiences may have exacerbated preexisting conditions such as substance abuse and personality disorders, and intensive exploration of such

associations are implicated in future research. Additionally, conditions and experiences during deployment may be associated with varying levels of discomfort, random violence, and/or chronic fear and strain (National Center for PTSD, 2004). A recent study of VA administrative data indicated higher rates of PTSD for veterans serving in Army and Marine ground units than for Navy and Air Force members, suggesting that more severe combat experiences are a factor in the development of mental health difficulties for this population (Kang & Hyams, 2005). It would therefore also be important to gather detailed information pertaining to deployment experiences in future studies of psychological symptoms among active duty military.

The existing literature presents a clear link between military experiences and PTSD symptoms, as well as barriers to care for service members (Hoge et al., 2004). A recent study also demonstrated that 35% of a large sample of Soldiers accessed mental health services within 12 months of returning from Iraq (Hoge, Auchterlonie, & Milliken, 2006). What has not been addressed empirically to date is which factors predict help seeking and access to care among Soldiers with mental health difficulties who have experienced combat. Referrals to a variety of services along a continuum of care may allow Soldiers to seek services within their individual comfort zones. For example, the availability of a range of outreach psychoeducational, voluntary group treatment, individual psychotherapy, and web-based interactive PTSD services, with multiple points of contact, may increase the probability that Soldiers will initiate and continue needed services.

Rona and his colleagues set forth criteria geared towards population level psychological screening in the military, some of which apply to screening in a behavioral health clinic (Rona, Hyams, & Wessely, 2005). Specifically, the screening tools must be "clinically, socially, and ethically acceptable," "simple, precise and validated," and "benefits from the screening program should outweigh potential harms" (p. 1258). The screening tools utilized here are well established mental health screening measures and certainly meet the first two criteria. The assumed benefit of screening is that it assists clinicians in providing the highest quality and most appropriate level of care possible. This area warrants further study in the form of a formal program evaluation with outcome measures such as long-term service utilization. Apropos to this, one limitation to the current study is the lack of baseline, pre-deployment levels of functioning for Soldiers who have been deployed. A longitudinal investigation would allow for more definitive conclusions to be drawn regarding the sources of symptomatology for clinical groups with and without particular combat experiences. A prospective approach taken with Soldiers would allow for the impact of specific experiences, particularly those related to combat, to be partialed out for this population. Additional detailed information on deployment experiences would have been helpful in these analyses, however, they were not part of the screening tool and should be added to render complete information for providers

Lack of formal diagnostic information has been listed as a limitation for several studies utilizing questionnaires (Orsillo et al., 1996). Documentation of patient diagnosis and diagnostic procedures would allow further interpretation of the data, as well as analyses of risk variables as they pertain to comorbidity. The further development of valid and reliable mental health screening tools will facilitate identification of Soldiers whose responses warrant more intensive exploration in multiple realms and who are unlikely to initiate mental health care. In other settings, such as post-deployment and in theater screening programs, screening ensures that Soldiers at risk for severe difficulties such as suicidal behavior and severe pathology are identified and treated prior to crisis situations. In a clinical setting, such tools allow for timely and more comprehensive information that can be quickly communicated to providers, suggesting

more detailed assessment of particular symptom domains or endorsed critical items. Given the high correlation between mental health disorders and separation from military service (45%) (Hoge et al , 2005), this could become a crucial concern for the military to address in the near future.

Current treatment models for traumatic stress and other symptom clusters still rely primarily on tertiary care for identification and treatment. Services are generally provided in a clinic setting following a traditional medical model. Patients may self refer for evaluation and treatment services, or may be referred by commanders or others when distress becomes evident. The individual is then evaluated based on self-report and presenting symptoms. Standardized assessments may or may not play a role in this process. It is unclear how many Soldiers in distress do not present for treatment and how different screening and referral approaches could impact this process. The implementation of a valid and reliable mental health screening process will facilitate identification of Soldiers whose responses warrant more intensive exploration in multiple realms. In a military setting, such a tool allows for timely and more comprehensive information that can be quickly communicated to providers in the context of referrals.

CONCLUSIONS

Behavioral health difficulties cover a wide range of symptoms and domains that may be appropriate for treatment by a variety of services and approaches such as individual or group psychotherapy, case management, and drug and alcohol treatment. Leveraging the use of technology may be the most effective and efficient mechanism to address this. Comprehensive screening findings in a military outpatient mental health setting are useful in guiding clinician assessment and treatment efforts. Such an approach enhances efficiency, reduces redundancy, and ensures that all critical domains are addressed. Technology could potentially be leveraged even further in the form of online screening, psychoeducational tools, CBT modules, and virtual reality tools for assessment and treatment of combat-related symptoms. Further research in the form of program evaluation is warranted to assess the efficacy of deployment-related screening programs, as well as those implemented in clinical settings.

APPENDIX A: TECHNICAL SUMMARY

HRA-II:

Soldiers are administered a pencil and paper version of the HRA-II in groups scheduled according to specific Active Duty units. Groups were scheduled according to unit deployment status. The screening may have occurred at any point between 60 and 120 days after returning from deployment, although the typical timeframe has been reported as between 60-90 days. Staff members administered the instrument and used scanners to score the instrument immediately after the Soldier completed the HRA-II. Soldiers meeting the 'URGENT' behavioral health scoring criteria are immediately referred to an on site mental health professional for further evaluation.

Following the scanning procedure, screening platform staff performed a data transfer. This process serves to populate a secure database housed within the Army Behavioral Health Technology Office, which is programmed to generate scale scores and critical item responses for reporting purposes. A quality assurance protocol will be implemented to identify any errors generated in this process.

BHSI:

The Behavioral Health Screener (BHSI) is administered in the MAMC behavioral health clinic as part of the standard clinic business practice. All active duty personnel presenting for intakes were asked to complete the BHSI scannable form in the waiting room. Clinic staff collected completed forms and scanned them via Teleforms software, checking for accuracy and correcting duplicate responses when prompted. The process served to populate an Access database, which was programmed to generate reports based on scale scores and critical item responses. Those reports were then included in patient files for clinician review.

Most recently (September 2005), this process has been completely automated. The Automated Behavioral Health Clinic (ABHC) standardizes the patient intake process for sub-specialty clinics at Madigan Army Medical Center, Ft. Lewis, Washington. The Automated Behavioral Health Clinic (ABHC) is a software system custom tailored to the unique business practices of Army Behavioral Health clinics. It can be adapted to any behavior health setting to enhance patient and provider experiences through automation and standardization of screening.

System Description

The ABHC is a web application with two web portals of entry, one for patients and one for providers. Both portals are available via secure Internet connection using Microsoft's Internet Explorer browser. As a web application, additional sites within an organization can be quickly and efficiently supported.

The ABHC web application has been developed using open standards software technologies including Java and XML. It relies on Oracle 10g database server technology. ABHC software development has been managed by the Army Behavioral Health Technology Office (ABHTO) using a spiral, Rapid Application Delivery (RAD) methodology so that every

unit of functionality has been validated by a requirements group of Army Psychology subject matter experts.

Patient Portal

The Patient Portal is a sophisticated questionnaire tool that dynamically skips upcoming questions not relevant to the respondent. Questions can be quickly added to the ABHC to accommodate new or evolving business needs.

Provider Portal

Data captured by the Patient Portal is stored in an Oracle 10g database, which is also utilized by the Provider Portal. Users of the Provider Portal can access meaningful reports that synthesize an individual patient's data and track daily clinic activity.

[Insert Figure 4 About Here]

APPENDIX B: FUNDED PERSONNEL AND PARTICIPANTS

[pasted from proposal]

Participating Personnel & Man Hours

Name Title Role Effort(%)
Bruce Crow Chief, Psychology Department PI 25
Greg Gahm Director, ABHTO MEDCOM BH Coord 10
John Meyer Chief, Population Outcomes HRA2 Outcomes Integ 5

Major Capital Equipment/Subcontracts

Programmer
Project Assistant

APPENDIX C: SUPPORTING DOCUMENTATION

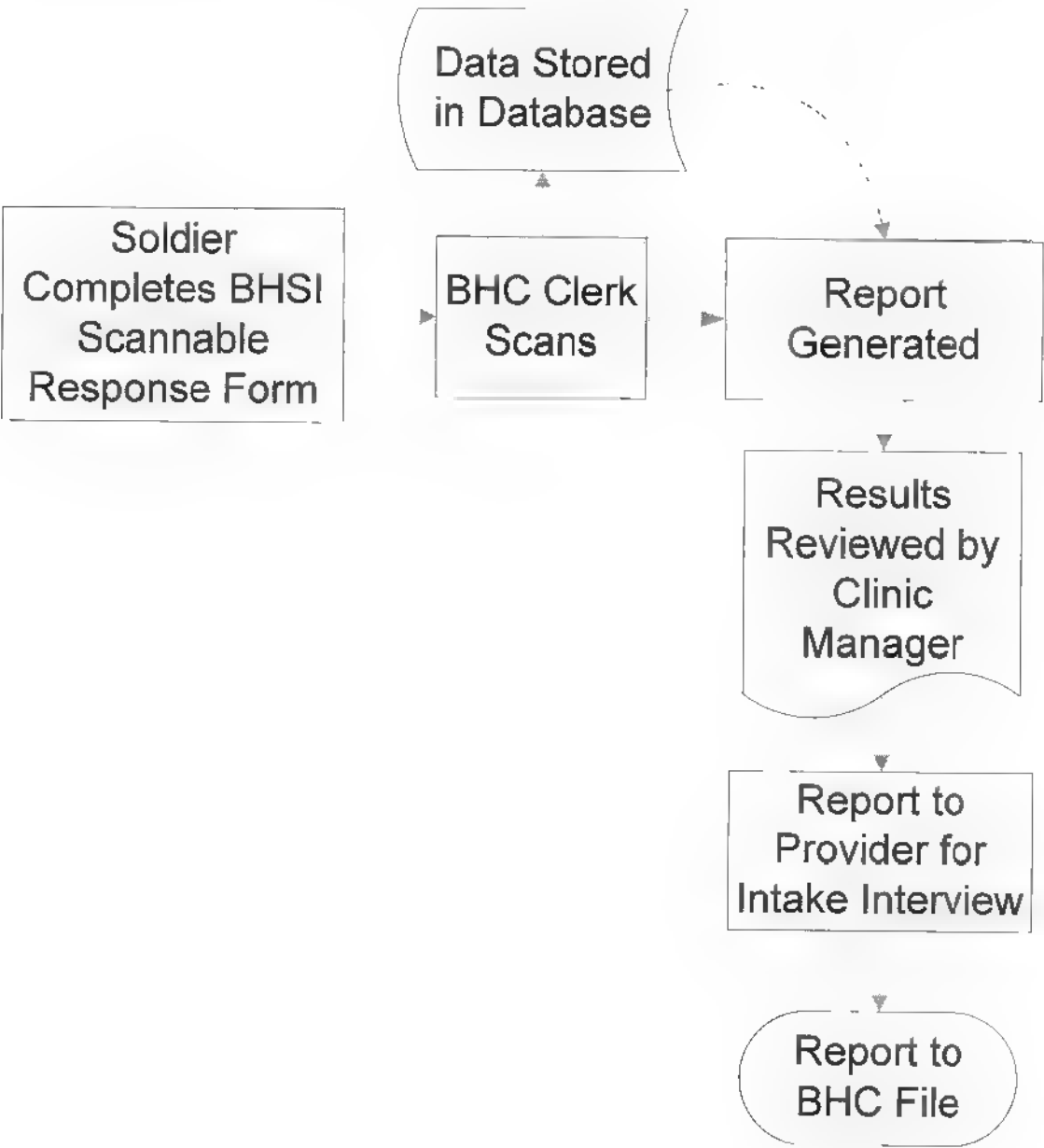Figure 1: Behavioral Health Screening Instrument Outpatient Clinic Administration

Figure 2: Health Risk Assessment - II 90-Day Post-Deployment Screening Instrument Administration
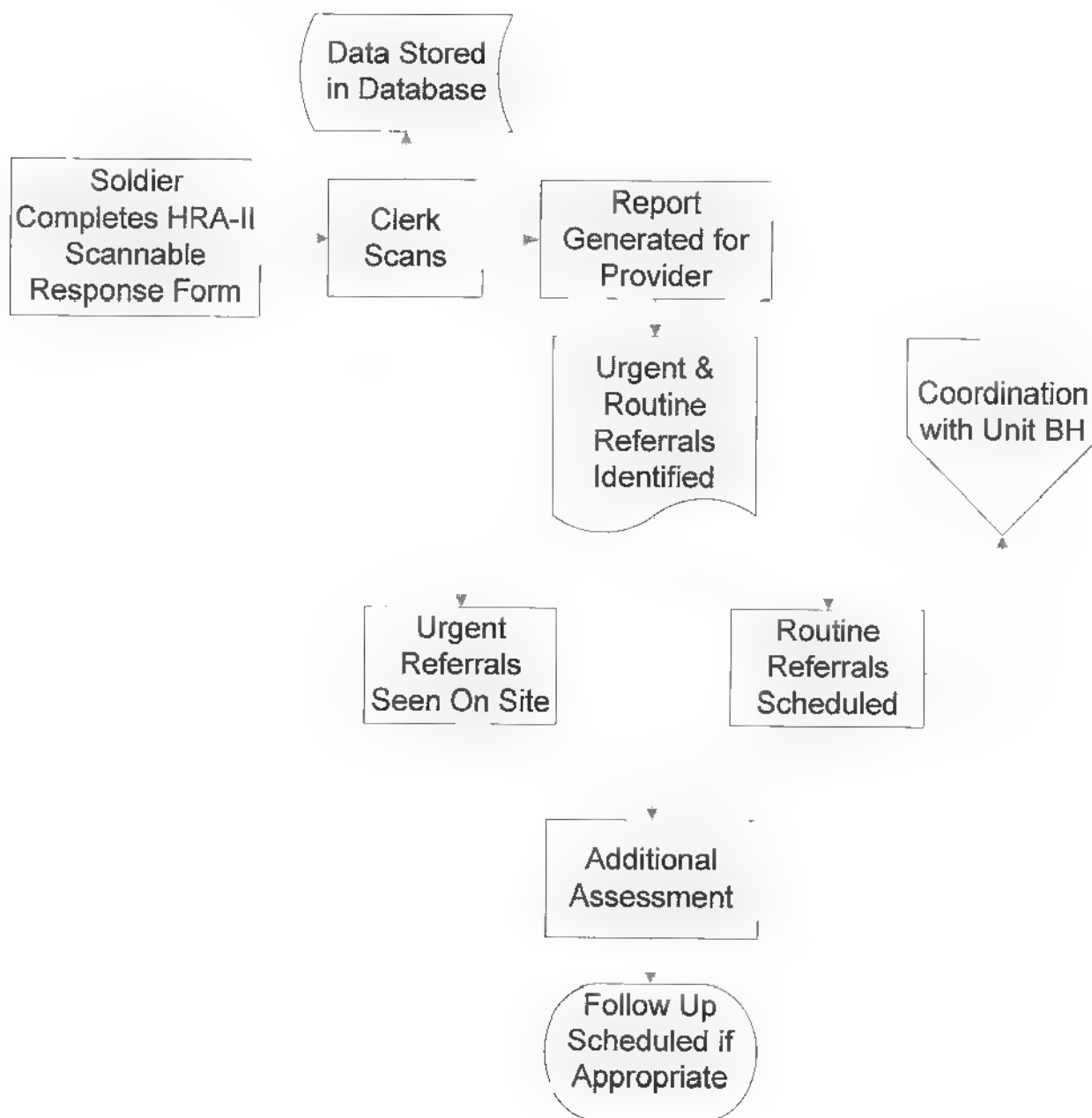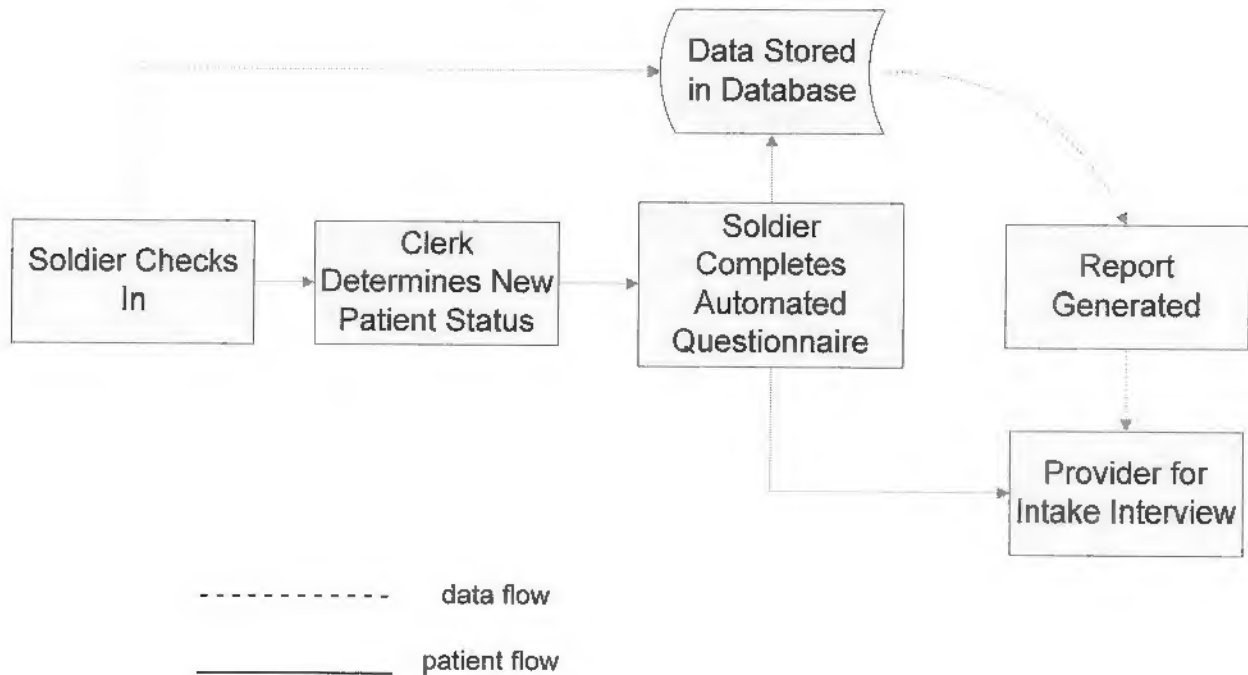
Figure 4: Automated Behavioral Health Clinic

Figure 4: Automated Behavioral Health Clinic

APPENDIX D: PRESENTATIONS, POSTERS, PUBLICATIONS

Select Recent Publications and Presentations:

Gahm, G.A., Lucenko, B.A., Retzlaff, P., & Fukuda, S. (in press). Relative Impact of Adverse Events and Screened Symptoms of PTSD and Depression among Active Duty Soldiers Seeking Mental Health Care. Journal of Clinical Psychology.

Gahm, G.A. & Lucenko, B.A. (under review). Screening Soldiers seeking care for mental health concerns.

Gahm, G.A., Kuhn, E., & Lucenko, B.A. (November 2005). Screening for mental health problems following deployment. Panel discussion at the International Society for Traumatic Stress Studies (ISTSS), Toronto, Ontario, Canada.

Gahm, G.A., Miller, J., & Meyer, J. (August 2005). Ft. Lewis Behavioral Health Screening. Presentation to 8th Annual Force Health Protection Conference, Louisville, KY.

Gahm, G.A., Lucenko, B.A., & Fukuda, S. (August 2005). Predictors of PTSD and depression among active duty Soldiers seeking mental health care. Poster presented at the Annual Meeting of the American Psychological Association, Washington, DC.

Gahm, G.A., & Lucenko, B.A. (April 2005). Electronic behavioral health screening in a military environment. Symposium at the Annual Meeting of the American Telemedicine Association, Denver, CO.

APPENDIX E:

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